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Marlene H. Dortch, Secretary
Federal Communications Commission
Washington, DC 20554

Re: *Promoting Spectrum Access for Wireless Microphone Operations,*
GEN Docket No. 14-166
Amendment of Part 15 of the Commission's Rules for Unlicensed Operation in the
Television Bands,
GEN Docket No. 14-165

Dear Ms. Dortch:

This letter is an ***ex parte* written communication**, responding to a letter filed on June 3, 2017, on behalf of Microsoft Corporation ("Microsoft"), reporting on *ex parte* oral communications to Staff Members in the **Offices of Chairman Pai and Commissioners Clyburn and O'Rielly**.

Microsoft reported that it urged the Commission not to permit an expanded class of wireless microphone users to "block wireless broadband operations in White Spaces channels." The Microsoft letter demonstrates misunderstanding, if not ignorance, of how wireless microphones operate and are used, and represents no more than a continuation of Microsoft's ongoing attempt to get the Commission to appropriate spectrum that is and will be used beneficially by others for Microsoft's own business and financial benefit, at no cost to Microsoft.

This letter is filed on behalf of **CP Communications, LLC** ("CPComms"). CPComms is a leading source for the rental of wireless production equipment -- including wireless microphones, wireless in-ear monitors, wireless intercom and wireless cueing -- to the broadcast, theatrical, live event, film, corporate, entertainment and other industries. CPComms also sets up, manages, and

supervises the operation of wireless equipment for its customers. CPComms' systems, both licensed and unlicensed, make extensive use of the UHF television band, much of which is about to be taken away from both television and wireless microphone users. CPComms must be able to continue to serve its customers thus has a significant stake in the Commission's proposals and ultimate decisions in this proceeding.

Microsoft attempts to paint a picture whereby the Commission is opening up new spectrum that will fully accommodate the needs of wireless microphone users of all sizes, but it neglects to mention how much television spectrum that is now used and relied on by wireless microphones is being taken away by reallocation of Channels 38-51 away from TV broadcasting. At best, the Commission is providing some replacement spectrum, not additional spectrum. It remains to be seen whether the new spectrum will be adequate, in light of propagation limitations and regulatory constraints, and how much financial burden will be placed on wireless microphone users who have to buy new equipment that has to be newly developed by manufacturers and thus will be costly. Smaller performing arts organizations will be particularly hard hit and may not find effective solutions to their needs.

The endless drumbeat trying to force all wireless microphones into narrowband digital operation demonstrates a fundamental lack of understanding of the job that wireless microphone will do. While a stagehand may be able to communicate using a narrowband channel, performers must have audio quality as good as a live voice and very low latency (<4 ms). Does Microsoft contend that it is satisfactory for a performer's voice to lag slightly behind the performer's visual actions on stage? Digital not only is not always better, but in many situations it is worse than analog operation whether measured by effectiveness or efficiency..

Microsoft ends its letter with a series of questions which it does not answer directly, but the implications demonstrate Microsoft's lack of understanding of the uses it is criticizing. The underlying premise is that license applicants will seek more spectrum than they need and not use it, but Microsoft provides no evidence that microphone users do not need the channels they might request or that they will behave any less responsibly than licensees in other services, whose representations in license applications are relied on by the Commission. Apparently, Microsoft especially distrusts yoga studios, but its disregard for corporate meeting needs is peculiar, since we are advised that Microsoft itself will deploy more than 80 wireless microphone, in-ear monitors and wireless intercom channels at its Worldwide Partner Meeting here in Washington next week. Perhaps it is not so important to Microsoft that it be able to deploy all of these facilities and find enough channels without interference.

It is not easy for the relatively small wireless microphone industry to compete with gigantic Microsoft in lobbying, but Microsoft's presentation should be seen for what it is – a result-oriented presentation that arranges facts in a manner intended to produce a desired outcome.

Respectfully submitted,



Peter Tannenwald
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Counsel for CP Communications, LLC

July 5, 2017

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